

**Re Item V**

**Reasoned statement with regard to novelty, inventive step or industrial applicability;  
citations and explanations supporting such statement**

Reference is made to the following documents:

- D1: EP-A-0 930 109 (GKN SANKEY LIMITED; AMBORN, PETER, DR.-ING; GKN AUTOSTRUCTURES LIMITED) 21 July 1999 (1999-07-21)
- D2: EP-A-0 815 985 (FIAT AUTO S.P.A) 7 January 1998 (1998-01-07)
- D3: PATENT ABSTRACTS OF JAPAN vol. 2000, no. 24, 11 May 2001 (2001-05-11) & JP 2001 200349 A (NISSHIN MANUFACTURING KK), 24 July 2001 (2001-07-24)

1. The present application does not meet the criteria of Article 33(1) PCT, because the subject-matter of claim 1 does not involve an inventive step in the sense of Article 33(3) PCT.

The document D1 is regarded as being the closest prior art to the subject-matter of claim 1, and discloses (the references in parentheses applying to this document):

An article made of a magnesium alloy tube (14), manufactured by internal high pressure forming.

The subject-matter of claim 1 therefore differs from this known article in that: the article has a grain size of between 10 $\mu$ m and 50 $\mu$ m.

The subject-matter of claim 1 of the present application cannot be considered as involving an inventive step (Article 33(3) PCT) for the following reasons.

The feature "a grain size of between 10 $\mu$ m and 50 $\mu$ m" is merely one of several straightforward possibilities from which the skilled person would select, in accordance with circumstances, furthermore such a grain size is typical for magnesium alloys (cf. D3 "the conventional problem that the crystal grains of an Mg-Al alloy for press forming, e.g. AZ31 by ASTM specification are as large as about 10-40 $\mu$ m").

2. Dependent claims 2-12 do not contain any features which, in combination with the features of any claim to which they refer, meet the requirements of the PCT in respect of inventive step, the reasons are as follows:

The additional features of claims 2-10 are known from D2.

The additional features of claims 11 and 12 are merely those of several straightforward possibilities from which the skilled person would select, in accordance with circumstances by normal workshop practice, without the exercise of inventive skill.

3. The present application does not meet the criteria of Article 33(1) PCT, because the subject-matter of claim 13 does not involve an inventive step in the sense of Article 33(3) PCT.

The document D2 is regarded as being the closest prior art to the subject-matter of claim 13, and discloses (the references in parentheses applying to this document):

A process for manufacture of a tube (4) from a billet (12) made of a magnesium alloy, the process comprising: heating the billet (12) to a predetermined temperature that is within a range of 300 °C to 605 °C; extruding the billet, using an extrusion press having a ram (15), an internal piercing mandrel, and a die, while maintaining the temperature of the billet (12) to stay within the range; and applying a force to the billet (12) so that it is forced between the die and the mandrel at a predetermined extrusion speed of the ram (15) to form a tube (4) having a predetermined extrusion reduction ratio. the extrusion speed is substantially between 5 mm/sec and 45 mm/sec, and the extrusion reduction ratio is substantially between 10:1 and 50:1.

The subject-matter of claim 13 therefore differs from this known process in that: the extrusion speed is substantially between 5 mm/sec and 45 mm/sec, and the extrusion reduction ratio is substantially between 10:1 and 50:1.

The solution proposed in claim 13 of the present application cannot be considered as



involving an inventive step (Article 33(3) PCT) for the following reasons.

The features "extrusion speed substantially between 5 mm/sec and 45 mm/sec, and extrusion reduction ratio substantially between 10:1 and 50:1" are merely those of several straightforward possibilities from which the skilled person would select, in accordance with circumstances by normal workshop practice in order to optimise an extrusion process starting from a billet of particular material and dimensions to achieve a product of desired dimensions.

4. Dependent claims 14-23 do not contain any features which, in combination with the features of any claim to which they refer, meet the requirements of the PCT in respect of inventive step, the reasons are as follows:

The additional features of claims 14-16 are known from D2.

The additional features of claims 17 and 18 are merely those of several straightforward possibilities from which the skilled person would select, in accordance with circumstances by normal workshop practice, without the exercise of inventive skill.

The additional features of claims 19-23 are known from D1.